



Rediscovery of *Crematogaster* subgenus *Colobocrema* (Hymenoptera, Formicidae) in Southeast Asia

SEIKI YAMANE¹, HIROSHI O. TANAKA² & TAKAO ITIOKA³

¹Department of Earth and Environmental Sciences, Faculty of Science, Kagoshima University, Kagoshima, 890-0065 Japan.

E-mail: sky@sci.kagoshima-u.ac.jp

²Graduate School of Bioagricultural Sciences, Nagoya University, Chikusa-ku, Nagoya, 464-8601 Japan (present address: Research Core for Interdisciplinary Sciences, Okayama University, Okayama, 700-8530 Japan)

³Graduate School of Human and Environmental Studies, Kyoto University, Sakyo-ku, Kyoto, 606-8501 Japan

Abstract

The *Crematogaster* subgenus *Colobocrema* was established to include the single species *C. cylindriceps* Wheeler, based on a single queen from the Philippines. We discovered a species close to or the same as *C. cylindriceps* in Borneo and provide descriptions of the queen, worker and male. This species lives in live climber plants of secondary and primary rainforests. The phragmotic morphology characterising the queen caste is considered an adaptation to a stem-inhabiting life style.

Key words: queen redescription, worker, male, host plants, taxonomic status

Introduction

In his review on the physiognomy of insects, Wheeler (1927) described a very peculiar *Crematogaster* species, in which the queen has a cylindrical and anteriorly sharply truncated head as in some *Camponotus* (*Colobopsis*) queens and soldiers. He erected a new subgenus, *Colobocrema*, for this new ant (*C. cylindriceps* Wheeler) because of the phragmotic morphology in the queen caste. Until now the holotype queen has been the only specimen for this species. Unfortunately he gave no description for the new subgenus and species in the text, although his line drawings (Fig. 39 a–c) depict important characteristics of the species useful for identification.

Recently one of the authors (Tanaka) collected a queen and worker that are most probably of this species, from a common leguminous climber in a secondary forest in Sarawak, Borneo. This climber plant has been known to be an ant-plant, whose partner is generally *Cladomyrma hobbyi* (Formicinae) in the study site. Later Yamane and Tanaka collected more specimens at the same site, including males. In this paper we describe the queen caste based on the Bornean specimens, and descriptions of the worker caste and male are given for the subgenus *Colobocrema* for the first time. We briefly discuss the taxonomic position of this ant with new information on the queen and worker castes.

Material and methods

All the specimens examined are point-mounted. Most of the examined specimens are deposited at Sk. Yamane (SKY) Collection, Kagoshima University, Kagoshima. One dealated queen and worker from Lambir Hills National Park are deposited at the Kyoto University Museum, Kyoto. Field observations were mainly made by Tanaka, and supplemented by Itioka and Yamane. Multifocused montage images were produced using Helicon Focus 4.75 Pro from a series of source images taken by a Nikon EOS Kissx4 digital camera attached to a Nikon ECLIPSE E600 microscope.